Southern Ute Indian Tribe Water Quality Program Gold King Mine Animas River Release Monitoring

The Southern Ute Water Quality Program is responding to the Gold King Mine release to the Animas River that occurred on August 5, 2015. The plume of sediment and metals from the mine crossed the Reservation boundary in the early morning hours of August 7, 2015. Before the plume reached the border, the Water Quality Program collected several samples to establish baseline conditions immediately prior to the plume. The Animas River has been monitored by the WQP for over a decade.

This document captures the immediate response of the WQP to the event. Please direct all questions to Curtis Hartenstine, Southern Ute Indian Tribe Water Quality Program Manager charten@southernute-nsn.gov, 970-563-4705

| Pre Release Monitoring: 8/6/15: | | | | | |
|---------------------------------|-----|-------|-------|-------|--|
| Site | WQ | Sonde | Macro | Photo | |
| 19-3 | Yes | Yes | Yes | Yes | |
| AR 16-0 | No | Yes | No | Yes | |
| Basin Creek | No | No | Yes | Yes | |
| NAR 6 | Yes | Yes | No | Yes | |

| Post Release Monitoring 8/7/15 and beyond | | | | | |
|---|-------|---------------------|--|-------|--|
| Site | WQ | Sonde | Macro | Photo | |
| 19-3 | Yes | Yes | Yes | Yes | |
| AR 16-0 | Yes | Yes | Yes | Yes | |
| Basin Creek | no | No | Yes | Yes | |
| AR7-2 | Yes | No | Yes | Yes | |
| NAR 6 | Yes | Yes | Yes | Yes | |
| Frequency of Collection | daily | 15 minute increment | TBD- collection to begin following plume | daily | |

| Analyte List | | | | | |
|--------------|----------|-------|------------|------|------|
| PARAMETER | Fraction | UNITS | METHOD | MDL | PQL |
| Aluminum | Trec, D | mg/l | M200.7 ICP | 0.03 | 0.2 |
| Calcium | Trec, D | mg/l | M200.7 ICP | 0.2 | 1 |
| fron | Trec, D | mg/l | M200.7 ICP | 0.02 | 0.05 |
| Magnesium | Trec, D | mg/l | M200.7 ICP | 0.2 | 1 |
| Potassium | Trec, D | mg/l | M200.7 ICP | | |
| Sodium | Trec, D | mg/l | M200.7 ICP | | |
| | | | | | |

| Silver | Trec, D | mg/l | M200.7 ICP | 0.01 | 0.03 |
|---------------------------------|---------|------|---------------------|--------|--------|
| Arsenic | Trec, D | mg/l | M200.8 ICP-MS | 0.0005 | 0.002 |
| Cadmium | Trec, D | mg/l | M200.8 ICP-MS | 0.0001 | 0.0005 |
| Copper | Trec, D | mg/l | M200.8 ICP-MS | 0.01 | 0.05 |
| Selenium | T and D | mg/l | M200.8 ICP-MS | 0.0001 | 0.0003 |
| Zinc | Trec, D | mg/l | M200.8 ICP-MS | 0.01 | 0.05 |
| Barium | Trec, D | mg/l | M200.8 ICP-MS | | |
| Beryllium | Trec, D | mg/l | M200.8 ICP-MS | | |
| Cobalt | Trec, D | mg/l | M200.8 ICP-MS | | |
| Chromium | Trec, D | mg/l | M200.8 ICP-MS | | |
| Manganese | Trec, D | mg/l | M200.8 ICP-MS | | |
| Molybdenum | Trec, D | mg/l | M200.8 ICP-MS | | |
| Nickel | Trec, D | mg/l | M200.8 ICP-MS | | |
| Lead | Trec, D | mg/l | M200.8 ICP-MS | | |
| Antimony | Trec, D | mg/l | M200.8 ICP-MS | | |
| Selenium | Trec, D | mg/l | M200.8 ICP-MS | | |
| Thallium | Trec, D | mg/l | M200.8 ICP-MS | | |
| Vanadium | Trec, D | mg/l | M200.8 ICP-MS | | |
| Bicarbonate as CaC03 | | mg/l | SM2320B-Titration | 2 | 20 |
| Carbonate as CaC03 | | mg/l | SM2320B-Titration | 2 | 20 |
| Hardness as CaC03 | | mg/l | SM2320B-Calculation | 1 | 7 |
| Residue, Non-Filterable (TSS) @ | | | | | |
| 150°C | | mg/l | SM2540D | 5 | 20 |

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